

U.S. Application No.: 10/539,934

Amendment A

Reply to Office Action Dated 05/07/2007

Attorney Docket: 3926.166

IN THE SPECIFICATION:

Please insert the following between paragraphs [00015] and [00016]:

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a cross sectional view of an optical system according to the present invention;

Fig. 2 is a side view of the optical system showing the light entry opening;

Fig. 3 is a cross sectional view of another embodiment of the optical system according to the present invention; and

Fig. 4 is a diagrammatic illustration of a control means for switching light sources and sensor elements or for operating the sensor elements in a fashion synchronized with the light sources, and a transceiver unit connected to the sensor elements.

Please amend paragraph [00016] as following:

[00016] The multifunctional illumination device can be fashioned in a particularly advantageous and compact way aimed at efficiency by assigning at least individual optical systems a number of semiconductor light sources or sensor elements. In such a case, one optical system acts on the individual light sources and sensors in a different way such that these exhibit different emission characteristics and reception characteristics. In practice, this can frequently be utilized extremely advantageously, for example by positioning a semiconductor light source at an optical system such that when functioning as a lower beam it illuminates the area right in front of a vehicle, while the sensor is positioned at the optical system such that can detect signals from regions further away in front of the vehicle. Such an arrangement is shown by way of example in a diagrammatic illustration of the figure Fig. 1 relating to this application. The figure Fig. 1 shows the cross section of an optical system (1) that is generally of flat design and at whose light

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entry surface there are arranged, firstly, a semiconductor light source (2) and, secondly, a sensor element (3). The sensor element can be, for example, a photodiode or a millimeter wavelength antenna (MMIC or SiMWIC component) implemented on a substrate. Owing to the optical properties of the optical system, the beam path and the light source (2) and the receiving range of the sensor element (3) are separated from one another and directed toward different regions in the surroundings of the multifunctional illumination device; here, directly in front of the vehicle in the lower beam region, and for the purpose of determining visibility, for example, in remote regions. The individual optical systems have a central region whose projection into a two-dimensional plane corresponds to a cylindrical 2-dimensional Cartesian oval, as clearly shown in Fig. 1. The optical systems are designed as flat elements whose light entry openings have an elongated, substantially rectangular shape (see Fig. 2). The central region of the optical systems can be combined with a parabolic reflector (see Fig. 3). The illumination device may also have a control means (4) for enabling the light sources and the sensor elements to be switched individually or in groups, or for operating the sensor elements in a fashion synchronized with the semiconductor light sources (diagrammatically illustrated in Fig. 4). The sensor elements 3 can be antennas connected to a transceiver unit (5) (see also Fig. 4).

Please amend the abstract of the disclosure as follows (on next page):

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